TRANSACTIONS

OF THE

NEW YORK SURGICAL SOCIETY.

Stated Meeting, October 14, 1908.

The President, Dr. Joseph A. Blake, in the Chair.

CHOLANGEITIS DUE TO COLON BACILLUS INFECTION.

Dr. John A. Hartwell presented a woman, 39 years old, who was admitted to Bellevue Hospital on September 10, 1908. She gave a marked alcoholic history, and on admission was found to be suffering from acute alcoholism, as a result of which she had a severe gastritis. It was learned that for a month previous she had been vomiting more or less frequently and had suffered from pain in the epigastrium after eating, which was somewhat relieved by the vomiting. Her condition had grown progressively worse, and on one or two occasions she had vomited blood and had passed blood per rectum. All these symptoms were at first referred to her alcoholic history. An examination, however, revealed a large, tender mass beneath the right costal margin, and apparently closely connected with the liver, which itself was much enlarged. She complained of intense pain, rather diffuse, over the right hypochondrium and extending through into the back. Her fever was of the septic type; she looked sick, and had a leucocytosis of 23,600, with 82 per cent. polynuclears. The urine was normal. She was not jaundiced.

The case was regarded as one of cholecystitis, and the patient was operated on September 14, 1908, under gas and ether anæsthesia. The abdomen then became less rigid, and the mass referred to above was found to be the liver itself. An incision was made through the upper half of the right rectus muscle, and upon opening the peritoneum the liver was found to extend almost to the umbilicus, being apparently uniformly enlarged in all direc-

tions. It was soft, dusky in color, but no area of actually broken-down tissue could be found. It was not jaundiced. An exploration of the gall-bladder and ducts showed them to be patent, and no calculi were found. The gall-bladder, however, seemed somewhat thickened and inflamed. The stomach, pylorus and duodenum were found to be normal, and there was an absence of adhesions around any of them. Owing to the intense pain in the back, and the absence of positive findings connected with the biliary system, the lesser peritoneal cavity was explored through the gastrohepatic omentum. The peritoneal sac was found free from adhesions, but the pancreas was enlarged to one and one-half its normal size, and rather soft, with its blood-vessels distended to a marked degree. The condition of the organ suggested the possibility of an abscess in its head, and accordingly an incision was made into this, parallel with the ducts. A free hemorrhage resulted, but no pus nor broken down tissue was found. The case was therefore deemed one of infectious cholangeitis.

The gall-bladder was stitched to the parietal peritoneum and drained externally through a tube. Its contained bile was thick and turbid. A cigarette drain was inserted into the incision in the pancreas, and the abdominal wound was closed in the usual manner. The patient bore the operation well, and left the table in good condition. The post-operative course was satisfactory, the temperature, pulse and blood findings gradually returning to the normal. There was a free drainage of bile through the tube, the bile becoming clear during the first day. The abdominal pain had entirely disappeared by the third day, and the liver was progressively growing smaller. The tube was removed from the gall-bladder on October 1, up to which time the drainage of bile had been copious. On that day the liver percussed about two inches below the free margin of the ribs, and could be felt. At the present time the drainage of bile has entirely ceased, and the liver is barely palpable below the free margin of the ribs. The patient is entirely free from pain and distress of any sort, and her digestion is excellent. Cultures from the bile drained from the gall-bladder at the time of operation showed a pure growth of colon bacillus. Examinations of the urine at no time showed any evidence of pancreatic involvement, the Cammidge test being absent on September 17 (Dr. Hastings) and again a week later (Dr. Meakin).

GONOCOCCUS PERITONITIS.

DR. HARTWELL presented a woman, 27 years old, who was admitted to the Presbyterian Hospital on September 18, 1908, in the service of Dr. Woolsey. Her family and personal history was negative up to the time of the birth of her child, one year previously; since then she had suffered from a vaginal discharge. For the past three months she had not felt as strong as previously, but no special symptoms were noted. On September 15 she was suddenly seized with a severe, cramp-like pain in the lower abdomen, slightly more marked on the left side, with a tendency to radiate over the entire cavity. On that and the following day she had severe diarrhœa, followed by obstinate constipation. She had repeated slight chills and an apparent rise in temperature at various times. She had vomited but once, and that on the day of admission.

The general appearance of the patient was that of a person suffering from intra-abdominal inflammation. There was no evidence of any disease outside of the peritoneal cavity. The abdomen was symmetrically distended, the distention being more marked in the lower half, but without difference on the two sides. It was tympanitic and tender to pressure, but no particular point of tenderness could be made out. No mass could be felt in the region of the appendix. Vaginal examination showed fulness and tenderness in the fornices, but no masses were felt. Temperature, on admission, 101; pulse, 120; respirations, 22; leucocytosis, 22,800; polynuclear count 81 per cent.

A diagnosis of spreading peritonitis was made, without determination of the site of the infection. One hour after admission, under gas and ether anæsthesia, a two-inch incision was made over the outer border of the rectus muscle, and upon opening the peritoneal cavity there was an escape of cloudy serum, without odor, which did not seem to be walled off. The appendix was exposed, drawn into the wound, and removed in the usual manner: it was slightly inflamed externally, but showed an entire absence of any lesion which could be held responsible for the peritonitis. The incision was slightly enlarged downward, and an exploration of the pelvic organs showed them to be normal excepting for the inflammation due to the peritonitis. The maximum degree of peritonitis, however, seemed to centre in the lower part of the

abdomen. The intestines were drawn out from this part with a view of finding a cause for the peritonitis in a perforation or volvulus. Nothing of this nature was found, however, and it was apparent that the peritonitis was general in character. The wound was enlarged upward, and a systematic search made of the whole intestinal tract, stomach, bile passages and pancreas without finding any entrance of infection. The gut was uniformly distended and covered in many places with placques of fibrin. The exploration had entailed an extensive handling of the gut, and it was thought that a fatal paresis would result unless the gut was emptied of its toxic contents. Accordingly, the procedure recently advised by Monks and others, of irrigating through and through the bowel was decided upon, though a modified technic was used. An irrigating tube was inserted into the bowel just below the duodenum, and the second one just above the cæcum. Large quantities of warm saline solution were washed through the whole of the small intestine, evacuating a very considerable quantity of intestinal contents, which from its appearance, must be considered as excessively toxic. This procedure, however, is by no means an easy one, as the intestines have a marked tendency to angulation, resulting in a stoppage of a continuous flow for a distance of more than two or three feet. This necessitates a milking of the irrigating fluid from one end to the other, and a very considerable handling of the intestine, which is known to be disastrous in peritoneal inflammation. Whether the damage thus entailed was more than counter-balanced by the elimination of the toxic material, may be a question. The favorable outcome in this case seems to have justified it. The stomach was also washed out. After a thorough flushing of the peritoneal cavity, the abdominal wound was sutured without drainage. An intravenous infusion of salt solution was deemed advisable at the end of the operation.

Postoperative Course.—The patient was placed in the Fowler position. Nothing was given by the mouth, and turpentine stupes were applied to the abdomen. The convalescence was slow, but uninterrupted toward recovery. Gonococci were found in the smears from the peritoneal fluid, with no other organism, and cultures on blood serum developed no growth. Gonococci were found in abundance in vaginal smears. On the third day after operation the patient received injections of gonococcus vaccine,

and the vaginal infection was treated locally. Whether the vaccine had any favorable effect on the course of the peritoneal infection is impossible to say. Had a microscopical examination of the peritoneal fluid been made immediately on opening the abdominal cavity, a diagnosis would have at once been established, and the exploration in search of the site of infection would have thus been avoided. Such an examination seems to be the proper course in similar cases.

PERFORATED GASTRIC ULCER.

DR. HARTWELL presented a man, 48 years old, who was admitted to Bellevue Hospital on September 2, 1908. A year ago he had an attack of abdominal pain, with nausea and vomiting, which was of short duration. Aside from this, his digestion had always been good. There was a history of syphilitic infection six years ago, for which he was under treatment for five months.

On the day of his admission, the patient had been eating a great many apples, and while on the street he was suddenly seized with intense pain in the abdomen. The pain gradually increased in severity and was accompanied by marked nausea, but no vomiting. According to his own statement, he was in a profuse cold sweat. He was brought to the hospital in an ambulance, and while on the trip vomited several times with some relief from the pain, but he felt so weak that he could scarcely move.

On admission to the hospital, the patient seemed to be in a state of collapse. He was suffering intense pain, and presented the typical facies of peritoneal infection. The abdomen was somewhat distended, tense and generally tender, although the maximum point of tenderness seemed to be in the epigastric region. Rigidity was about equal in the two recti muscles, and no masses could be felt. A diagnosis of peritonitis was made, with the probable site of infection in the upper right quadrant, though the appendix could not be excluded. The leucocyte count was 18,000, with 79 per cent. polynuclears. There was slight elevation of pulse and temperature.

The patient was operated on two hours after admission. An incision was made through the right rectus at the level of the umbilicus. Free pus (not foul) was found in the peritoneal cavity; this was particularly localized in the right fossa. The appendix was found to be slightly adherent and kinked, but not

actively inflamed or perforated. Appendectomy done. Pus was found under the liver. The gall passages were normal. The ileum was explored and no perforation found. The region of the pylorus was explored, showing evidences of a fresh peritonitis and pus. The stomach was dilated. The transverse mesocolon was opened and the lesser peritoneal cavity and posterior wall of the stomach were apparently normal. There was no induration in the pancreas, but an indurated area was found on the anterior superior surface of the stomach, one inch from the pylorus. The stomach and pylorus were angulated, due to adhesions. In the centre of the indurated area was a pin-hole perforation, which was closed by overlapping the stomach wall with silk sutures. The pylorus was apparently patent; gastro-enterostomy, therefore, was not done, owing to the patient's condition and the time already consumed in the operation. The ulcer and perforation above described were found only on a second examination of the pyloric region, they having been at first mistaken for the result of the peritonitis, and not the cause of it. The abdominal wound was closed in layers, and a drain was placed at the site of the ulcer.

The postoperative course was satisfactory and progressive toward recovery. The patient was fed by mouth on the third day, and within ten days was taking full hospital diet with absolutely no discomfort. He had now been up and about the wards for about two weeks, and showed no evidence whatever of any gastric lesion. Gastric analysis at the present time showed a marked hyperacidity.

Dr. Hartwell said this case was shown with the hope of bringing out a discussion on the subject of performing a gastro-enterostomy in cases of acute perforation of gastric ulcer, either primarily or secondarily.

Dr. Ellsworth Eliot, Jr., said that this question of whether or not to do a primary or secondary gastro-enterostomy after operation for acute perforation of the stomach had been very fully discussed at one of the meetings of the Society last spring. At that time, the speaker said, he had prepared a paper on the subject of acute perforative ulcer of the stomach and duodenum, with particular reference to the advisability of doing a gastro-enterostomy, either simultaneously or later on. That paper was published in the October and November (1908) issues of the American Journal of Surgery. It contained the result of the

author's investigations, covering the reports of several hundreds of cases published in the literature during the past five years, and supplemented by additional reports furnished by members of the American Surgical Association and others. Altogether, during that period, about one hundred cases were found where a gastro-enterostomy had been done at the time of the primary operation, and in these cases the mortality was high—at least fifteen or twenty per cent., whereas in those cases where the perforation was closed without gastro-enterostomy, the mortality was considerably lower.

A study of the cases also showed that in a very considerable number of them, in fact, in the great majority in which simple closure of the perforation was done without gastro-enterostomy either at the time of the primary operation or subsequently, the patients remained well for periods varying from one to five years; in one instance for six years.

In view of these facts, Dr. Eliot said, it seemed proper to postpone gastro-enterostomy until the patient should develop obstructive symptoms or show some other reason for further operation. His own feeling was that the operation of gastro-enterostmy was indicated at the time of the primary operation in those cases where closure of the ulcer caused mechanical obstruction, but that it should not be undertaken for the purpose of obviating the possible future occurrence of stenosis, ulcer or hemorrhage, or other protracted symptom inscribed with that condition.

HYPERTROPHIC PYLORIC STENOSIS.

Dr. Lucius W. Hotchkiss presented a man, 32 years old, upon whom he had operated for pyloric obstruction at Roosevelt Hospital on July 28, 1908. The patient, who was admitted to the hospital on July 24, had been the subject of considerable study elsewhere, and was thought first to be a case of simple gastric dilatation, but as his condition failed to improve under treatment, he was brought to the hospital for operation by Dr. Howard C. Hanscom, who had made the diagnosis of pyloric obstruction. His illness dated back one year, when his appetite became capricious. Two months ago he began to vomit, this occurring generally after supper, sometimes within half an hour, sometimes after several hours. The vomiting was preceded by nausea, but no pain, and was followed by relief. The vomitus

consisted of undigested food, and did not taste sour nor bitter, and, according to the patient's statement, it never contained food which had been taken a considerable time before. He had been constipated for the past year, and had lost, he thought, about eighteen pounds in weight.

His previous history was unimportant, excepting for the fact that he had had syphilis about six years before, with a rash and mucous patches, and moderate alopecia. He was treated by mercury for two years, and had shown no outward manifestations of the disease since. Four years ago he had had a "nervous breakdown," and was in a sanitarium for seven months. He had been unable to work for a year and a half, and his responses as to his symptoms and condition were given slowly and with apparent effort, so that it was very difficult to obtain from him a complete and satisfactory history.

Physical examination revealed a small, rounded mass, of firm consistency, in the region of the pylorus; this was felt on deep pressure in the subcostal angle, just to the right of the median line. It was movable laterally and vertically, and seemed also to move with respiration. It was not tender and sometimes it was not demonstrable. The patient was thin and sallow, and appeared to be somewhat feeble. He showed no glandular enlargements; his heart and lungs were normal; no knee-jerks could be elicited.

An analysis of the gastric contents showed free hydrochloric acid, 10; total acidity, 73; combined, 33; lactic acid, absent; starch digestion poor.

The patient was put to bed, saline enemata were ordered, and a soft, selected diet allowed. Under this regimen his strength seemed to improve, and he was prepared for operation, which was done on July 28, four days after admission. Through the usual incision above the umbilicus the stomach was found to be moderately dilated and loosely surrounded by the lesser omentum. The pylorus and first part of the duodenum were freely movable. The pylorus was thickened by a fairly uniform infiltration of its coats, though this was perhaps slightly more marked posteriorly, where there was a small patch of connective tissue in the peritoneal covering. This thickening of the walls of the pylorus, which was due either to hypertrophy or infiltration of the muscular coat, constituted the tumor felt, and had led to the contraction of the

opening into the duodenum to about the size of a lead pencil. On section, there was no ulcer of the mucosa found, and the contracted pyloric opening was practically concentric with its outer circumference. The pathologist reported the condition as "inflammatory," and upon search no spirochætæ pallida were found, nor were any evidences of endarteritis or phlebitis of the vessels in the affected region noted. There was moderate soft enlargement of the glands along the pyloric portion of the greater curvature, but section showed nothing of a malignant or specific nature.

The pylorus was excised in the usual manner, and the ends of the duodenum and stomach were closed by sutures. A posterior gastro-enterostomy without a loop was then done, after the method of Mayo, and the abdominal wound was closed.

The after-course of the case was without incident and the wound healed promptly. The patient was allowed water by the mouth on the day after the operation, but was otherwise nourished by small saline enemas containing half an ounce of dextrose. On the second day, albumin water was given by the mouth every two hours, and on the sixth day fluids without milk were given in four-ounce quantities every four hours. On August 6, nine days after the operation, soft boiled eggs and scraped beef sandwich were allowed, and a soft selected diet was given after that date. The patient rapidly regained his strength, and his digestion is now excellent. He was discharged from the hospital on August 15, and since then had gained 34 pounds in weight.

This case, Dr. Hotchkiss said, had seemed rather remarkable in its pathology, and had led to considerable discussion as to the possibility of its being a syphilitic stenosis on account of the patient's antecedent history, although the histological examination failed to furnish conclusive proofs.

RENAL CALCULUS.

ALEXANDER B. JOHNSON presented a man, 39 years old, who for the past fifteen years had suffered from attacks of pain in the right lumbar region, radiating downward into the right testis. These attacks were very severe, and lasted about ten minutes. During the past year they had increased in frequency, so that a number of attacks had occurred each day, and had become more severe. He had never noticed anything peculiar about his urine, and otherwise his health was fairly good. A year ago an X-ray

picture of good quality showed no shadow of a stone. His urine at that time had been reported free from any abnormal ingredient. A second X-ray picture was taken at that time, and was also negative. The patient thereupon decided to have no operation done unless his symptoms grew worse.

He re-entered the hospital on September 11, 1908, with the history that the attacks of pain had become more and more annoying, and that he had lost some flesh. His urine at that time contained a few blood-cells visible under the microscope. He was operated on September 17, 1908, by Dr. Johnson. An incision was made below and parallel to the free border of the ribs, extending from the outer border of the rectus in front to the outer border of the erector spinæ behind. The kidney was exposed, freed from its fatty capsule, and drawn into the wound so that its pedicle could be firmly held by the fingers as the kidney rested in the palm of the left hand. Dr. Johnson was unable to feel the stone on palpation of the hilum and pelvis. There was nothing abnormal about the appearance of the kidney. A hat-pin introduced through the convex border of the kidney into the pelvis at once touched a stone, and an incision an inch and a half in length was made along the middle of the convex border of the kidney into the pelvis, and a forceps inserted through the cut withdrew a somewhat heart-shaped stone weighing 40 grains. It consisted chiefly of uric acid, as might be inferred from the fact that although the patient was a slender man, and the X-ray negatives were satisfactory, the stone cast no perceptible shadow.

Dr. Johnson said he attached great importance to the complete delivery of the kidney, so that the pedicle could be compressed between the fingers while the kidney was incised, thus avoiding the troublesome hemorrhage which often occurred unless this was done. He said that the study of corrosion preparations of the blood-vessels of the kidney showed that while in the cortex of the organ, along the central portion of the middle of its convex border there were but few blood-vessels of any size, such was not the case at the bases of the pyramids, where vessels passed freely from side to side.

The kidney wound was sutured by two deeply placed mattress sutures of fine chromic gut, and a cigarette drain was inserted down to the wound of the kidney and brought out at the posterior angle of the external wound. The remainder of the wound in the abdominal wall was closed by sutures. Although the wound

remained entirely clean, and showed no evidences of urinary leakage, and although the patient continued to pass plenty of urine, which was normal in character except for a moderate amount of blood, some anxiety was caused by the fact that the patient ran a high temperature and was delirious for a week. The temperature did not reach normal until twelve days after the operation. Primary union occurred in the wound, excepting at the drainage opening. The patient left the hospital well twenty days after the operation, namely, on October 7, one week ago, and thus far had had no further discomfort.

RESULT OF OPERATION FOR UNDESCENDED TESTIS.

DR. JOHNSON presented a boy, twelve years old, whose right testis had never descended into the scrotum; otherwise he was a healthy child. There was a history of the occasional appearance of a tender mass in the inguinal canal. The operation was done about two months ago. An incision was made along the course of the inguinal canal. The external oblique aponeurosis was split as in Bassini's operation, and inspection showed the presence of a congenital hernial sac to which were adherent the structures of the cord, with the exception of the testis. The testis itself was but loosely connected with the epididymis, and lay within the abdominal cavity. The hernial sac was dissected away from the cord and sutured with a purse-string suture at the level of the internal ring. Bassini's operation was then done; the cord was pulled out of the inguinal canal with some force and sutured to the pillars of the external abdominal ring. The scrotum was then inverted and the testis sutured with catgut to its most dependent point. A very slight inflammatory reaction followed the operation, and the testis became slightly swollen, though not notably tender nor painful. Primary union occurred in the wound. At the present time, two months after the operation, the testis had increased in size; it lay well down in the scrotum, and there seemed to be no tendency toward a recurrence.

PERITONITIS IN CHILDREN WITH UNKNOWN SITE OF INFECTION.

DR. CHARLES N. DOWD read a paper with the above title, for which see page 821.

DR. HOTCHKISS said he had seen four or five cases of generalized peritonitis, all in adults, for which there was no assignable

cause. He could not speak of these cases in detail, as no cultures had been made. One of the cases recovered after a secondary opening, with irrigation of the abdominal cavity. The patient was a woman with a diffuse general peritonitis without visible cause, even after a very thorough exploration of the abdominal cavity. The cavity was irrigated, but the patient did very badly. Her condition was so desperate that as a forlorn hope the house surgeon removed the sutures two or three days later, introduced a tube, and again irrigated the abdominal cavity. Following this she made a good recovery.

DR. ELIOT said he had never seen cases in children like those described by Dr. Dowd. The cases he had had experience with were more like those referred to by Dr. Hotchkiss. The speaker said he had seen four or five cases of streptococcus peritonitis in adults, with recovery after an illness of four or five weeks, with continuous high temperature (104–5) and a corresponding pulse rate. Subsequently, the temperature fell by lysis. These patients were delirious most of the time. The stomach, as a rule, held out well. In one of the cases, a woman, where he was called upon to do an operation for ventral hernia two years after the peritonitis which originated in the pelvis, a careful exposure and exploration of the organs there situated revealed nothing abnormal.

Dr. Eliot said that in one case of general peritonitis in a young man of 25, the patient presented all the physical signs of a gastric perforation. Upon opening the abdomen, the small intestine was found enormously distended, but no definite cause for the peritonitis could be discovered. The patient recovered and returned in the course of six or eight weeks with a second attack of peritonitis from which he also after operation recovered. At the second operation, many adhesions were found, but no cause for the peritonitis could be discovered.

The speaker said that while we saw many cases of peritonitis in children, it was usually of the appendix type and of colon bacillus origin. The extensive blood counts made in connection with these cases were interesting, in that they indicated a severe grade of infection, and particularly for the reason that in this group of cases diarrhœa is the rule, whereas in other serious forms of spreading or general peritonitis diarrhœa is the exception. The presence of diarrhœa in peritonitis usually indicates a favorable

prognosis. It is surely of great importance to emphasize the fact that, in the peritonitis of children, diarrhœa should not in any way be favorably continued nor should it lead to delay in operation.

Dr. John F. Erdmann said he had seen two of the cases in all probability reported by Dr. Kerley. One of the cases was an infant about eight months old, who was practically moribund at the time of operation. The abdominal cavity was filled with purulent material. Nothing was found in the region of the appendix or elsewhere to account for the infection. The case resulted fatally. In another case, a girl of eight or nine years old, with scarlet fever and otitis, there was a general streptococcus infection complicated with middle-ear trouble. This patient was also moribund, and Dr. Erdmann said he refused to operate. In a third case, seen in Hackensack with Dr. Edgar K. Conrad, the patient was a child two and a half years old who gave a history of diarrhœa similar to that in the cases reported by Dr. Dowd. There was distinct abdominal distention, and upon opening the abdomen, at least half a pint of pus was evacuated. The appendix was removed, although not dire and to the extent one would expect in such a purulent peritonitis. The child made a slow recovery.

Dr. John B. Walker said he had seen two cases of peritonitis in children in which the infection was of unknown origin. One was in a child of five years; the other in a child of seven. One recovered and one died.

Dr. Joseph A. Blake said he had operated on several cases of peritonitis in which he was unable to find the source of the infection. The patients died, and no bacterial examinations were made. He recalled several cases in children where the infection was traced to the Fallopian tube, and those in whom the tube was removed got well, while those in whom it was allowed to remain, died. In one or two of the cases, a little pus could be expressed from the tube. Possibly, some of these were of gonorrhœal origin.

In connection with this general subject, Dr. Blake said he had had the misfortune of operating on two cases, both adults, in which the peritonitis complicated an unrecognized pneumonia. In both there was free peritonitis, with marked injection of the peritoneum with serum and fibrin below the diaphragm, but no other discover-

able site of infection. Both cases recovered. The possibility of a peritonitis associated with an intrathoracic infection should not be lost sight of.

DR. DOWD, in closing, said that the blood examination in these cases showed a high leucocytosis and a high polynuclear count. The difficulty in diagnosis in children was partly due to the fact that abdominal inflammations were so often simply accompaniments of inflammations which were primary in other parts of the body. In the early stages of the inflammation there is less abdominal rigidity than frequently exists with a beginning pneumonia. The cases here recorded had been under the observation of very careful observers and early diagnosis had not been made.